

ABSTRACT OF THE INVENTION

[0064] All embodiments of the present invention relate to a toothbrush to prevent tooth abrasion and gum damage during use. A first embodiment of the invention includes a handle including an open cavity and a neck interconnected to the handle by a pivot. The neck is movable between an aligned first position and a second angled position relative to the handle. A leaf spring is bonded to the end of the neck at a first end, and the second end of the leaf spring engages the handle to provide biasing resistance. The leaf spring is configured such that if pressure to the neck exceeds a threshold limit, there is movement of the neck portion from the first position to a second position. The threshold limit is the pressure just below the pressure at the brush that may cause damage to the hard and soft tissue of the mouth. A protective sheath envelops the junction between the handle member and the neck member to prevent accumulation of unwanted material within the cavity of the handle. A second embodiment is equivalent in structure and components to the first embodiment except that it also includes a manual adjustment of the biasing force of the leaf spring to provide variable pressure and a motor for providing mechanical movement of the brush head. Third and fourth embodiments are equivalent in structure and components of the first and second embodiments, respectively, except that the leaf spring is bonded to the handle instead of the neck.